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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

1 RECORD OF ORAL HEARING
2 UNITED STATES PATENT AND TRADEMARK OFFICE

3 _____
4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES

6 _____
7 Ex parte MAKOTO MIYAMOTO,
8 REIJI TAMURA,
9 AKIRA KASHIWAKURA, HIROSHI SHIRAI,
10 YOSHIHIRO IKARI,
11 MAKOTO IIMURA, YUMIKO ANZAI
12 and KAZUYO UMEZAWA

13 _____
14 Appeal 2008-0758
15 Application 10/656,337
16 Technology Center 1700

17 _____
18 Oral Hearing Held: Tuesday, March 11, 2008
19
20

21 _____
22
23 Before EDWARD C. KIMLIN, BRADLEY R. GARRIS, and
24 CHARLES F. WARREN, Administrative Patent Judges
25

26 ON BEHALF OF THE APPELLANTS:

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1 The above-entitled matter came on for hearing on Tuesday,
2 March 11, 2008, commencing at 2:20 p.m., at the U.S. Patent and Trademark
3 Office, 600 Dulany Street, Alexandria, Virginia, before Jennifer M.
4 O'Connor, Notary Public.

5 JUDGE KIMLIN: Good afternoon, Mr. Backenstose.

6 MR. BACKENSTOSE: Good afternoon, Your Honors.

7 JUDGE KIMLIN: You may begin when you're ready.

8 MR. BACKENSTOSE: This appeal is of one rejection, one
9 claim over two references. The issue before the court is well defined; would
10 it have been obvious to modify *Kojima*, which discloses a single
11 germanium- tellurium-bismuth composition which is outside the claimed
12 compensation range, to include a composition from *Yamada* when both
13 *Kojima* and *Yamada* disclose that their compositions cited by the examiner
14 are inferior to otherwise available compositions in this prior art references
15 and the claimed composition exhibits unexpected results?

16 Claim 1 is directed to a recording layer formed of a
17 composition that consists of bismuth, germanium and tellurium in
18 proportions defined by six points on the germanium-bismuth-tellurium
19 ternary diagram.

20 *Kojima*, the primary reference discloses multiple possible
21 compositions for a recording layer. *Kojima* discloses only one germanium-
22 tellurium-bismuth composition, germanium 45, bismuth 4, tellurium 51,
23 which lies outside the claimed composition range.

24 JUDGE WARREN: How close is that for like a general
25 composition to your claimed range?

1 MR. BACKENSTOSE: Offhand, I don't know exactly how to
2 characterize it, but in figure 1 of our reply brief, it's fairly close.

3 JUDGE KIMLIN: Why wouldn't the principle of *Titanium*
4 *Metals* apply here?

5 MR. BACKENSTOSE: The principle of *Titanium Metals*?

6 JUDGE KIMLIN: The decision, if you're familiar with it?

7 MR. BACKENSTOSE: Yeah, I'm not prepared to answer that.

8 JUDGE KIMLIN: In a situation where if the claimed
9 composition is sufficiently close to one disclosed by the prior art, you would
10 expect the prior art composition to reasonably possess the same properties;
11 so even though they are different, are they unobviously different?

12 MR. BACKENSTOSE: Yeah, one of our points that we will
13 argue is that there is unexpected results in the claimed composition range.
14 That's under appeal.

15 JUDGE KIMLIN: Is the comparison made between that closest
16 prior art composition?

17 MR. BACKENSTOSE: No, it's not.

18 JUDGE GARRIS: I want to ask you about that because I see in
19 your evidence appendix that you write none for evidence relied upon in this
20 appeal. So what do you mean when you say you have evidence of
21 unexpected results?

22 MR. BACKENSTOSE: On the specification they just -- there
23 was reference made that the prior art compositions exhibit various problems,
24 and I think these were briefed in the appeal brief, a list of eight problems.
25 It's also disclosed that applicants have spent a lot of time in searching for
26 compositions that could overcome these problems and they discovered that

1 the claimed composition range exhibited properties that were not -- they're
2 not disclosed in the prior art references.

3 JUDGE KIMLIN: So this is specification data?

4 MR. BACKENSTOSE: Yes, specification.

5 JUDGE KIMLIN: And wouldn't that be lacking probative
6 value since it's not a comparison to the closest prior art?

7 MR. BACKENSTOSE: Yeah, it's just -- it's just stated in the
8 specification and there's no specific comparison made. *Yamada* discloses
9 various composition ranges for a recording layer medium consisting of
10 germanium, tellurium and bismuth. *Yamada* discloses that the best
11 performing compositions are those on the line defined, while there's a
12 formula given in *Yamada* and I'll refer to this as the XGET System.

13 The XGET System lies outside the claimed compensation range
14 and appears as shown in figure one of our reply brief, that it is very nearly
15 co-linear with *Kojima's* germanium-tellurium-bismuth composition cited by
16 the examiner. *Yamada* discloses the ex-germanium-tellurium system as
17 having rank one, i.e., it is the perfect -- the best performing composition and
18 is the preferred embodiment and it's being -- it discloses being capable of
19 rewritten over one million times at a rotation of velocity of 30 meters per
20 second.

21 *Yamada* discloses further composition ranges that vary from the
22 XGET System by the tellurium -- amount of tellurium in the composition.
23 The rank two composition range does include the claimed composition
24 range; however, *Yamada* discloses that this is inferior and it's only capable,
25 for example, 100,000 rewrites at 25 meters.

1 JUDGE WARREN: Right, but *Yamada* says it's a satisfactory,
2 that all of the ranks in there are satisfactory recording materials.

3 MR. BACKENSTOSE: Yes, that's true.

4 JUDGE WARREN: Why is it inferior? Why would one of
5 ordinary skill in the art hesitate to use a composition that falls in these other
6 ranks?

7 MR. BACKENSTOSE: We argue that one of ordinary skill
8 would wish to perform -- wish to create the best performing composition
9 possible and that *Yamada* leads towards choosing something from the XGET
10 System.

11 Appellants submit that the proposed combination is not obvious
12 because first, the off section has impermissibly combined references.
13 Specifically as a first point, the Patent Office has failed to establish any
14 reason or motivation to combine. As a second point, *Yamada* leads away
15 from the proposed combination, and as a third point, it would not have been
16 obvious to try one of the compositions from outside the XGET System.

17 Even if the proposed combination is made, the claimed
18 compositions are not taught because as a fourth point, one of ordinary skill
19 in the art would have chosen the composition from the XGET System and as
20 a fifth point, the Applicants claimed composition range provides unexpected
21 results.

22 To my first point, the examiner's answer alleges that a
23 substitution in the recording medium of *Kojima* by a composition disclosed
24 by *Yamada* would have been obvious due to the small shift in composition.
25 But, however, in contrast to the Patent Office's position, the relationship

1 between *Yamada's* composition ranges cannot be characterized as a small
2 shift.

3 *Yamada's* compositions, like ranks two through four, are
4 disclosed as large slots across the germanium-tellurium-bismuth diagram.
5 Unless one of ordinary skill in the art doing this would not see that there is a
6 small shift between *Kojima's* compensation and the composition ranges --

7 JUDGE WARREN: Doesn't *Kojima* say generally that the
8 same three elements can be combined to make a recording layer without
9 specifying any particular ranges with respect to any of the elements?

10 MR. BACKENSTOSE: *Kojima*?

11 JUDGE WARREN: Yeah.

12 MR. BACKENSTOSE: I'm not sure offhand. I know that they
13 described the specific combinations cited by the examiner.

14 JUDGE WARREN: They say generally that you can use
15 though -- you can use any combination there. In fact, they say it probably
16 about eight or nine times.

17 MR. BACKENSTOSE: I'm not prepared to answer on that
18 point right now. And even if there was a small shift in composition, these --
19 the examiner's answer does not provide any statement why one of ordinary
20 skill would have been motivated to perform the alleged substitution. Such a
21 small shift by itself, not being aware of the tellurium case, I would argue it's
22 not motivation or suggestion that combined without additional information,
23 which is not present in the references.

24 Both *Yamada* and *Kojima* failed to disclose that there's any
25 problem with *Kojima's* disclosed germanium-tellurium-bismuth composition
26 that would be solved by using a composition of *Yamada*.

1 The proper inquiry for an obviousness rejection, as per the
2 Supreme Court's holding in *KSR*, is whether one of ordinary skill, given the
3 prior art as a whole and the knowledge of one of ordinary skill, would have a
4 reason to produce the proposed combination. *Kojima's* germanium-
5 tellurium-bismuth composition is able to be recorded on and erased with
6 powers of 5.2 milliwatts and 2.0 milliwatts, respectively. In contrast, the
7 recording layer -- various recording layers disclosed by *Yamada* are
8 disclosed as having -- requiring powers of 8 to 15 milliwatts and 5 to 8
9 milliwatts to record on and erase.

10 Thus, based on the references by themselves, one of ordinary
11 skill would have understood that the compositions disclosed by *Yamada* are
12 not -- are inferior to the compositions disclosed by *Kojima* and would not
13 have made the proposed combination.

14 Towards my second point, as I've alluded to, *Yamada* discloses
15 several composition ranges for an optical recording medium which are
16 ranked based on their utility, the XGET System being the preferred one.
17 This composition however, is outside the claimed composition range and the
18 rank two system, which I said before, which does include our claimed
19 composition range, is disclosed as being inferior.

20 Thus, we would argue it does not make technical sense for one
21 of ordinary skill to make the proposed combination because they -- one of
22 ordinary skill will seek to make a recording medium that would have the
23 best -- best possible characteristics.

24 To my third point, the Patent Office's sole basis for alleging
25 obviousness appears to be that it would have been obvious to try various
26 combinations from *Yamada*. However, this does not meet the requirements

1 for a prima facie case of obvious because the compositions in *Yamada's*
2 ranks two to four encompass an infinite number of possible combinations.

3 As solved in *re: Dow Chemical Company*, a prior art suggestion
4 for virtually endless experimentation is not a case of prima facie
5 obviousness. Further, in *KSR*, the Supreme Court states that when there is a
6 design need or market pressure --

7 JUDGE WARREN: I don't think this so much calls for -- if
8 there's a case of experimentation here. *Yamada* tells you what would work.
9 He says that they'll all work, right?

10 MR. BACKENSTOSE: Yes, in ranks -- ranks one through
11 four, yes. But he does indicate -- here we argue that he leads the way
12 because he teaches the XGET System is --

13 JUDGE WARREN: But he doesn't disparage any of his
14 compositions, does he?

15 MR. BACKENSTOSE: Not that I'm aware of. As we were
16 talking about in *KSR*, the Supreme Court states that it would be obvious to
17 try -- if there's a finite number of predictable solutions, and at this -- the
18 obvious try could support a 103 rejection by itself. However, we argue that
19 in ranks two to four in *Yamada*, they disclose an infinite number of
20 compositions, and thus, there are not a finite number of possible solutions.
21 And second, one of ordinary skill, we argue, is that they would not regard
22 them as possible solutions because they would look to the XGET System as
23 being the preferred embodiment.

24 To my fourth point, even though under the proposed
25 combination, we believe the claimed recording layer composition is not
26 taught, as I've already said before, we believe that one of ordinary skill in the

1 art would have chosen something from the XGET System rather than
2 choosing one of the others because *Yamada* leads towards that -- that
3 solution by presenting it as being superior.

4 We believe that the Patent Office has been looking to
5 applicants' disclosure as a roadmap therefore, to allege that one of ordinary
6 skill would have chosen something from the lesser ranks, ranks two to four.

7 To my fifth and final point, even if the proposed combination is
8 proper, we assert that the claimed composition range, it's of some expected
9 results. As disclosed in the specification, prior art recording layers exhibit
10 high deterioration levels at the inner circumferential portion of the recording
11 medium because of the low rotational velocity at that point.

12 However, as a result of the claimed composition -- the
13 development of the claimed composition range, Appellants have discovered
14 a recording layer which can simultaneously record at like 8.2 meters per
15 second and 25 meters per second, and thus, the claimed composition range
16 exhibits superior performance for both linear velocities in the low level and
17 the high level exhibited at the inner and outer regions of a recording disk.

18 And we note that these advantageous properties are not
19 disclosed by *Yamada* or *Kojima*. At this point, I'm finished with my
20 prepared remarks, if there's any other questions.

21 JUDGE KIMLIN: We have no further questions. The issues
22 are quite clear.

23 MR. BACKENSTOSE: So Appellants respectfully request this
24 honorable board to reverse the rejection of claim 1. Thank you.

25 JUDGE KIMLIN: Thank you for coming.

26 (Whereupon, at 2:33 p.m., the hearing was concluded.)